



# Active Bacterial Core Surveillance (ABCs) Report

## Emerging Infections Program Network

### Group A *Streptococcus*, 2011



#### ABCs Areas

California (3 county San Francisco Bay area); Colorado (5 county Denver area); Connecticut; Georgia (20 county Atlanta area); Maryland (6 county Baltimore area); Minnesota; New Mexico; New York (15 county Rochester and Albany areas); Oregon (3 county Portland area); Tennessee (20 urban counties)

#### ABCs Population

The surveillance areas represent 32,457,399 persons.

Source: National Center for Health Statistics bridged-race vintage 2011 postcensal file

#### ABCs Case Definition

Invasive group A streptococcal disease: isolation of group A *Streptococcus* (*S. pyogenes*) from a normally sterile site or from a wound culture accompanied by necrotizing fasciitis or streptococcal toxic shock syndrome in a resident of a surveillance area in 2011.

#### ABCs Methodology

ABCs personnel routinely contacted all microbiology laboratories serving acute care hospitals in their area to identify cases. Standardized case report forms that include information on demographic characteristics, clinical syndrome, and outcome of illness were completed for each identified case. Strains were *emm* typed at CDC. Regular laboratory audits assessed completeness of active surveillance and detected additional cases.

All rates of invasive group A streptococcal disease were calculated using population estimates for 2011. For national estimates of cases, race- and age-specific rates of disease were applied from the aggregate surveillance area to the age and racial distribution of the 2011 U.S. population. Cases with missing data, excluding ethnicity, were multiply imputed using the sequential regression imputation method<sup>†</sup>

#### Reported ABCs Profiles

Race	No.	(Rate*)
White	1,028	(4.2)
Black	211	(4.1)
Other	135	(5.0)

\* Cases per 100,000 population for ABCs areas

Ethnicity	No.	(Rate*)
Hispanic	156	(3.7)
Non-Hispanic	790	-----
Unknown	428	-----

\* Cases per 100,000 population for ABCs areas

#### <sup>†</sup> Surveillance Note

At the start of this surveillance year (2011), missing race (n=215) data were multiply imputed using sequential regression imputation methods. Previously, missing race data were distributed in the same proportion as known cases.

Age (years)	Cases		Deaths	
	No.	(Rate*)	No.	(Rate*)
< 1	15	(3.7)	0	(0.00)
1	15	(3.7)	0	(0.00)
2-4	36	(2.8)	2	(0.16)
5-17	98	(1.8)	3	(0.05)
18-34	177	(2.3)	11	(0.14)
35-49	252	(3.7)	21	(0.31)
50-64	311	(4.9)	38	(0.60)
≥ 65	470	(11.8)	82	(2.06)
Total	1,374	(4.2)	157	(0.48)

\* Cases or deaths per 100,000 population for ABCs areas

ABCs Area*	Most common <i>emm</i> types <sup>†</sup>	% of area isolates
California	1, 82, 89, 28, 75, 11, 12	71.0
Colorado	1, 6, 3, 12, 2	65.6
Georgia	1, 12, 89, 3, 11, 2	78.0
Maryland	1, 89, 12, 92, 28, 6	63.3
Minnesota	1, 12, 59, 28, 89	65.7
New Mexico	1, 58, 82, 3, 12, 87, 6, 89	75.2
New York	1, 4, 6, 12, 89, 28, 44, 118, 3	77.9
Oregon	1, 12, 89, 28, 11, 59, 2, 77	84.6
Tennessee	1, 3, 89, 12, 4	70.6
Total	1, 12, 89, 3, 6, 28	60.9

\* Connecticut contributed cases but no isolates.

<sup>†</sup> Requires a minimum of 3 or more isolates and ≥ 5% of isolates typed

Syndrome	No.	(%)
Cellulitis	540	(39.3)
Necrotizing fasciitis	100	(7.3)
Pneumonia	241	(17.5)
Primary bacteremia	277	(20.2)
Streptococcal toxic shock	48	(3.5)

Note: Some cases had more than one syndrome.

#### Potentially preventable invasive group A streptococcal disease

During 2011, 3 cases (ages 3 months, 76 and 82 years) of invasive GAS disease were detected in patients with varicella.

#### National Estimates of Invasive Disease

Cases: 13,300 (4.3/100,000)

Deaths: 1,550 (0.5/100,000)

#### Citation

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Available via the internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas11.pdf>